

Remarks

In the Office Communication sent 7 February 2008, the Examiner states, “The reply filed on October 31, 2007 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): Applicant has failed to present arguments that comply with CFR 1.111(b) by point out the specific distinctions believed to render the claims patentable over the references in presenting arguments in support of new claims and amendments.” The Examiner continues, “Applicant should submit an argument under the heading ‘Remarks’ pointing out disagreements with the examiner’s contentions.” Accordingly, Applicants provide the following remarks. For the sake of completeness, this Response also sets out the pending claims above, as amended by the Response filed 31 October 2007.

Independent Claims 1, 9, and 21 are Allowable Over *Karpoff*

The Examiner maintains the rejection of independent Claims 1, 9, and 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2001/0049740 by *Karpoff* (“*Karpoff*”).

Karpoff merely discloses an InfiniBand server architecture that includes one or more central processing units (CPUs) inside a server boundary connected to a switch outside the server boundary. (Figure 4A; Paragraphs 0085 and 0089). The switch includes one or more separate controller devices. (Figure 8; Figure 10; Paragraph 0102; Paragraph 0104). The controller devices are separate from each other and connected to each other by an external bus. (Figure 12A; Paragraph 0111). Separate blades of different types house the separate controllers, and the separate controllers each have a single CPU. (Figures 12A-12B; Figure 0108).

In contrast, independent Claim 1 of this Application recites:

A node comprising:
a motherboard;
a switch comprising eight or more ports, the switch integrated on the motherboard; and
at least two processors, each processor communicably coupled to the integrated switch and integrated on the motherboard.

Independent Claims 9 and 21 recite similar limitations.

As Applicants discussed in the Response filed 29 May 2007, *Karpoff* fails to disclose, teach, or suggest each and every limitation of independent Claim 1. As an example, even assuming for the sake of argument the CPUs in *Karpoff* could properly be considered *at least two processors, each processor integrated on the motherboard*, as independent Claim 1 recites, *Karpoff* would still fail to disclose, teach, or suggest *a switch comprising eight or more ports, the switch integrated on the motherboard*, as independent Claim 1 recites. Instead, the CPUs and the switch in *Karpoff* reside on opposite sides of a server boundary, which clearly teaches away from the CPUs and the switch in *Karpoff* being *integrated on the same motherboard*, as independent Claim 1 recites. As another example, even assuming for the sake of argument one device in *Karpoff* contained both a switch and a controller device (as the Examiner asserts) and the switch and the controller device could properly be considered *a switch comprising eight or more ports and at least two processors*, respectively, *Karpoff* would still fail to disclose, teach, or suggest the one device is a *motherboard* and both the switch and the controller device were *integrated on the one motherboard*, as independent Claim 1 recites. *Karpoff* provides no disclosure, teaching, or suggestion whatsoever that the switch and the multiple controller devices are *integrated on one motherboard*, as independent Claim 1 recites.

In the Office Action sent 31 July 2007, The Examiner responds:

Applicant on pages 7 and 8 argue that although Karpoff teaches “a switch comprising eight or more ports and at least two processors . . . Karpoff would still fail to disclose, teach, or suggest that one device is a motherboard and that both the switch and the controller device were integrated on the one motherboard.

It is noted that Applicant appears to consider figure 4a to be the only embodiment taught by Karpoff. It is noted that the cited sections of the rejections encompass the various embodiments taught by Karpoff and consideration of such embodiments do show the limitations of the claims. It is noted that figures 12a and 12b appear to resolve the apparent deficiencies argued by the Applicant.

Applicants respectfully note the Examiner has misquoted Applicants. Applicants did not state *Karpoff* “teaches a switch comprising eight or more ports and at least two processors,” as the Examiner asserts. Instead, Applicants stated that, “even assuming for the sake of argument one device in *Karpoff* contained both a switch and a controller device (as the Examiner asserts) and the switch and the controller device could properly be considered ***a switch comprising eight or more ports and at least two processors***, [as independent Claim 1 recites,] respectively,” *Karpoff* would still fail to disclose, teach, or suggest specific limitations recited by independent Claim 1. Applicants do not assert or acquiesce in any assertion that *Karpoff* “teaches a switch comprising eight or more ports and at least two processors.”

Moreover, Applicants respectfully disagree with the Examiner’s assertion that Figures 12A and 12B of *Karpoff* make up for the deficiencies of *Karpoff* previously demonstrated by Applicants. Figure 12A of *Karpoff* merely illustrates separate controller devices connected to each other by a bus external to the separate controller devices, with separate blades of different types housing the separate controllers. Figure 12B of *Karpoff* merely illustrates a controller device with a single CPU. Therefore, Figures 12A and 12B of *Karpoff* clearly fail to disclose, teach, or suggest ***a switch comprising eight or more ports and at least two processors all integrated on the same motherboard***, as independent Claim 1 recites. Instead, Figures 12A and 12B of *Karpoff* teach away from any such arrangement.

“To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim.” *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001). “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. ch. 2131 (Rev. 3, Aug. 2005) (quoting *Verdegaal*, 814 F.2d at 631). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the patent claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); M.P.E.P. ch. 2131 (Rev. 3, Aug. 2005) (quoting *Richardson*, 868 F.2d at 1236). Furthermore, “[t]he elements must be arranged as required by the claim.” M.P.E.P. ch. 2131 (Rev. 3, Aug. 2005) (citing *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)). As shown above, *Karpoff* fails to disclose, either expressly or inherently, each and every limitation recited in independent Claim 1. Therefore, *Karpoff* does not anticipate independent Claim 1 under governing Federal Circuit case law and the M.P.E.P.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1, 9, and 21 and all their dependent claims.

New Independent Claim 28 is Allowable Over the Cited References

Applicants have added independent Claim 28, which recites:

A node comprising:
a motherboard;
at least two first processors integrated onto the motherboard and operable to communicate with each other via a direct link between them; and
a first switch integrated onto the first motherboard, the first processors communicably coupled to the first switch, the first switch operable to communicably couple the first processors to at least six second motherboards each comprising at least two second processors integrated onto the second motherboard and a second switch integrated onto the second motherboard operable to communicably couple the second processors to the first motherboard and at least five third motherboards each comprising at least two third processors

integrated onto the third motherboards and a third switch integrated onto the third motherboards, the first processors operable to communicate with particular second processors on a particular second motherboard via the first switch and the second switch on the particular second motherboard, the first processors operable to communicate with particular third processors on a particular third motherboard via the first switch, a particular second switch on a particular second motherboard between the first motherboard and the particular third motherboard, and the third switch on the particular third motherboard.

The cited references fail to disclose, teach, or suggest all the limitations of independent Claim 28. As an example, the cited references fail to disclose, teach, or suggest *at least two first processors integrated onto the motherboard and operable to communicate with each other via a direct link between them and a first switch integrated onto the first motherboard, the first processors communicably coupled to the first switch*, as independent Claim 28 recites. As another example, the cited references fail to disclose, teach, or suggest *the first processors operable to communicate with particular third processors on a particular third motherboard via the first switch, a particular second switch on a particular second motherboard between the first motherboard and the particular third motherboard, and the third switch on the particular third motherboard*, as independent Claim 28 recites.

For at least these reasons, Applicants respectfully request allowance of independent Claim 28 and all its dependent claims.

Conclusion

For at least the foregoing reasons, Applicants respectfully request allowance of all pending claims.

If a telephone conference would advance prosecution of this Application, the Examiner may call Travis W. Thomas, Attorney for Applicants, at 214.953.6676.

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